Notice of Allowability	Application No.	Applicant(s)	
	09/753,164	MORIAT, ALAIN	
	Examiner	Art Unit	
	Andrew C Flanders	2644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *the application dated 27 December 2000*.

2. ☒ The allowed claim(s) is/are *1-44*.

3. ☒ The drawings filed on *27 December 2000* are accepted by the Examiner.

4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
      1. ☐ Certified copies of the priority documents have been received.
      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
      3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
      1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

DETAILED ACTION

Allowable Subject Matter

1. Claims 1 – 44 are allowed.

2. The following is an examiner's statement of reasons for allowance:

Regarding Claims 1, 19, 29, 31, 37 and 43, Uchiyama (U.S. 4,841,827) discloses means for converting an input waveform signal into a digital waveform signal (col. 2 lines 34 – 36) (i.e. (a) receiving samples of the input signal, wherein the input signal includes the one or more tones), positive and negative peaks of the input waveform signal generated can be detected and can be stored in the memory means (col. 3 lines 29 – 34) (i.e. (b) operating on the samples to generate a transform array, wherein the transform array includes a positive frequency image and a negative frequency image for each of the one or more tones and (c) identifying frequency locations of one or more first magnitude peaks in the transform array). Uchiyama does not disclose elements (d), (e), (f) or (g) of claim 1. Kumar (U.S. 5,165,051) discloses computing estimates of the amplitude frequency, and phase of a signal (abstract) (i.e. (d) computing a frequency estimate, amplitude estimate and phase estimate for each of the one or more tones based on complex values of the transform array in a neighborhood of a corresponding one of the frequency locations), adjusting the amplitude, frequency and phase of a signal (abstract) (i.e. (e) correcting the complex values of the transform array in a neighborhood of each frequency location based on the frequency estimates, amplitude estimates and phase estimates for the one or more tones) and outputting the estimates of the amplitude, frequency and phase of the new signal to produce a best

estimate of the amplitude frequency and phase of the signal of interest (abstract) (i.e. (f) computing an improved frequency estimate, improved amplitude estimate and improved phase estimate for each of the one or more tones based on the corrected complex values in the neighborhood of the corresponding frequency location). Neither Uchiyama nor Kumar disclose element (g). However it would have been obvious to one of ordinary skill in the art to store the final improved frequency estimates. While Uchiyama and Kumar disclose all elements of claim 1, there would not have been sufficient motivation for one of ordinary skill in the art at the time of the invention to combine the said inventions to arrive at applicant's claimed invention. It would also not have been obvious to do so. Uchiyama and Kumar are considered to be the closest prior art found and as such the claims are allowable over the prior art.

Claims 2 – 18, 20 – 28, 30, 32 – 36, 38 – 42 and 44 are allowable as being dependent upon an allowable independent claim.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Chappell (U.S. 6,665,622), Chen (U.S. 6,473,732), Uchiyama

(U.S. 5,018,428), Kageyama (U.S. 5,412,152), Shinohara (U.S. 6,718,217), Usa (U.S. 5,436,403) and Corwin (U.S. 5,808,225).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew C Flanders whose telephone number is (703) 305-0381. The examiner can normally be reached on M-F 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sinh Tran can be reached on (703) 305-4040. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

acf

SINH TRAN
SUPERVISORY PATENT EXAMINER